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37. A package for an integrated circuit die comprising:  
a metal die pad and a plurality of metal contacts,

wherein said die pad has a first surface, and each said contact has a first end facing the die pad, a severed second end opposite the first end, a first surface, a second surface opposite the first surface, and a lip at the first surface of the contact fully around a circumference of the contact except at the second end surface;

an integrated circuit die on the die pad;

a plurality of conductors each electrically connected between the die and the first surface of a respective one of the contacts; and

a package body formed of an encapsulant material, said encapsulant material covering the die and underfilling the lip of the contacts, wherein the second surface of each said contact is exposed at a horizontal first exterior surface of the package body.

2. 38. The package of claim 1, wherein the die pad includes a first surface upon which the die is mounted and a lip at the first surface fully around a circumference of the die pad.

3. 39. The package of claim 2, wherein the die pad includes a second surface opposite the first surface, and the second surface of the die pad is exposed at the first exterior surface of the package body.

4. 40. The package of claim 2, wherein the first surface of the die pad is in a horizontal plane with the first surface of the contacts.

5. 41. The package of claim 1, wherein the second surface of the die pad is fully covered with the encapsulant material.

6. 42. The package of claim 1, further comprising asperities on said lip, said asperities being covered by the encapsulant material.

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43. The package of claim 37, wherein the package body includes orthogonal exterior side surfaces adjacent to the first exterior surface of the package body, and the second end surface of each contact is exposed in a common plane with one of the exterior side surfaces of the package body.

44. A package for an integrated circuit die comprising:  
a metal die pad and a plurality of metal contacts,

wherein said die pad has a first surface, a second surface, and a peripheral side surface around a circumference of the die pad between the first and second surfaces, said side surface including a central depression fully around the circumference of the die pad, and

wherein each said contact has a first end facing the die pad, a severed second end opposite the first end, a planar first surface, a second surface opposite the first surface, and opposing side surfaces between the first and second end surfaces and the first and second surfaces, the first surface of the contact is in a horizontal plane with the first surface of the die pad, and the first end surface and the opposing side surfaces of the contact include a central depression;

an integrated circuit die on the first surface of the die pad;

a plurality of conductors each electrically connected between the die and the first surface of a respective one of the contacts; and

a package body formed of an encapsulant material,

wherein the encapsulant material covers the die and fills the central depression of the side surface of the die pad and the central depression of the first end surface and side surfaces of the contacts, and the second surface of the contacts is exposed at a first exterior surface of the package body.

45. The package of claim 44, wherein the side surface of the die pad and the side surfaces and first end surface of the contacts further include numerous asperities, said asperities being covered with the encapsulant material.

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46. The package of claim 44, wherein the package body includes orthogonal exterior side surfaces adjacent to the first exterior surface of the package body, and the second end surface of each contact is exposed in a common plane with one of the exterior side surfaces of the package body.

47. A package for an integrated circuit die comprising:  
a metal die pad and a plurality of metal contacts,

wherein said die pad has a first surface, a second surface, and a peripheral side surface around a circumference of the die pad between the first and second surfaces, said side surface including a protruding central peak fully around a circumference of the die pad, and

wherein each said contact has a first end facing the die pad, a severed second end opposite the first end, a surface, a second surface opposite the first surface, and opposing side surfaces between the first and second end surfaces and the first and second surfaces, and the first end surface and the opposing side surfaces of the contact include a protruding central peak;

an integrated circuit die on the first surface of the die pad;

a plurality of conductors each electrically connected between the die and the first surface of one of the contacts; and

a package body of an encapsulant material,

wherein the encapsulant material covers the die, and the protruding central peak of the side surface of the die pad and of the first end surface and side surfaces of the contacts extends into the encapsulant material, and the second surface of the contacts is exposed at a first exterior surface of the package body.

12/46. The package of claim 47, wherein the second surface of the die pad is exposed in the plane of the first exterior surface of the package body.

13/46. The package of claim 47, wherein the second surface of the die pad is fully covered with the encapsulant material.

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50. The package of claim 47, wherein the side surface of the die pad and the side surfaces and first end surface of the contacts further include numerous asperities on said protruding central peak.

51. The package of claim 47, wherein the package body includes orthogonal exterior side surfaces adjacent to the first exterior surface of the package body, and the second end surface of each contact is exposed in a common plane with one of the exterior side surfaces of the package body.

16 1/2. The package of claim 47, wherein the first surface of the die pad is in a horizontal plane with the first surface of the contacts.

53. A package for an integrated circuit die comprising:  
a metal die pad and a plurality of metal contacts,

wherein said die pad has a first surface, a second surface opposite the first surface, and a peripheral side surface around a circumference of the die pad between the first and second surfaces, and

wherein each said contact has a first end facing the die pad, a severed second end opposite the first end, a first surface in a horizontal plane with the first surface of the die pad, a second surface opposite the first surface of the contact, and opposing side surfaces between the first and second end surfaces and the first and second surfaces of the contact;

an integrated circuit die on the first surface of the die pad;

a plurality of conductors each electrically connected between the die and the first surface of one of the contacts; and

a body formed of an encapsulant material, wherein the encapsulant material covers the die and the second surface of the contacts is exposed at an exterior surface of the package body, and

wherein the side surface of the die pad includes a means around the circumference of the die pad for vertically locking the die pad to the encapsulant material, and the side surfaces and first end surface of the contacts include a means for vertically locking the contact to the encapsulant material.

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18. ~~54~~<sup>17</sup>. The package of claim ~~53~~<sup>17</sup>, wherein the second surface of the die pad is exposed in the plane of the first exterior surface of the package body.

55. The package of claim 53, wherein the side surface of the die pad and the side surfaces and first end surface of the contacts further include numerous asperities that are covered with the encapsulant material.

56. The package of claim 53, wherein the package body includes orthogonal exterior side surfaces adjacent to the first exterior surface of the package body, and the second end surface of each contact is exposed in a common plane with one of the exterior side surfaces of the package body.

21. ~~57~~. A package for an integrated circuit die comprising:  
a planar metal die pad and a plurality of horizontal metal contacts,  
wherein said die pad has a first surface, a second surface opposite the first surface, a peripheral side surface around the die pad between the first surface and the second surface, and a lip at the first surface of the die pad fully around the die pad, and the contacts each have a first surface and an opposite second surface;  
an integrated circuit die on the first surface of the die pad;  
a plurality of conductors each electrically connected between the die and the first surface of a respective one of the contacts; and  
a package body formed of an encapsulant material, said encapsulant material covering the die and underfilling the lip of the die pad, wherein the second surface of each said contact is exposed at a horizontal first exterior surface of the package body.

22. ~~58~~<sup>21</sup>. The package of claim ~~57~~<sup>21</sup>, wherein the second surface of the die pad is exposed at the first exterior surface of the package body.

23. ~~59~~<sup>21</sup>. The package of claim ~~57~~<sup>21</sup>, wherein the first surface of the die pad is in a horizontal plane with the first surface of the contacts.

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